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September 6, 1973

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N73-30307

LAND USE MANAC

Defense Supply Agency DCAFD Federal Building Fort Snelling, Minnesota 55111

Attn: Russell L. Peterson

Enclosed herewith is the Type 1 report for ERTS project #SR-283 (control NASS-21801) for the period of July 1 through August 31, 1973.

Sincerely,

Dwight Brown

Project Coordinator

DB:jp Encl.

J. Medwin, Contracting Officer Code 245, GSFC Greenbelt, Maryland 20771

G. R. Stonesifer, Technical Officer Code 430, GSFC Greenbelt, Maryland 20771

ERTS, Project Scientist Code 650, GSFC Greenbelt, Maryland 20771

Arthur Anderson, Scientific Monitor Code 650, GSFC Greenbelt, Maryland 20771

ERTS, Program Manager Code ER, NASA Headquarters Washington, D. C. 20546

J. H. Boeckel, Code 430 NASA/Goddard Space Flight Center Greenbelt, Maryland 20771

TYPE I PROGRESS REPORT

July 1 - August 31, 1973

- a. Land Use Management in Minnesota #283.
- b. Joseph E. Sizer (ST-360).
- c. There have been no changes in the rate of receipt of standing order materials and retrospective requests.
- d. This project is focused on evaluating the ability of ERTS-1 imagery to update and refine the detail of land use information in the Minnesota Land Management Information System. Work in this reporting period has been directed toward defining the capabilities of the ERTS-1 system to provide information about surface water and wetland resources; testing and evaluating data input and output procedures for Itasca County and Metropolitan Twin Cities test areas, and meeting with administrators and resource information users from the Minnesota Department of Natural Resources (DNR) to identify their information needs.

Some phases of the wetland and water classification from ERTS-1 imagery will be completed in the next reporting interval. Evaluation of ERTS imagery for surface water inventory, one of DNR's stated basic needs, will be completed in December.

Because of different physical characteristics some lakes can be consistently singled out as being different from nearby lakes. Also, some lakes undergo significant changes in area and shape as seen on ERTS-1 imagery. Not all of these changes are related to the dynamics or physical characteristics of the lakes. Some appear to be produced by either seasonal variations in the lake surroundings or inconsistent image quality. This problem will be carefully examined in the next reporting interval.

A full scale systems test for Itasca County is nearly complete. Two townships were selected and entered in the MLMIS data system. Although baseline information in the system does not use the same variables and operational definitions, computer maps of several kinds of information, some over 10 years old, were drawn for comparison with maps based on ERTS-1 information. A series of maps for one of these townships is appended to this report.

The Twin Cities Metropolitan test area is scheduled for completion in December. Initial interpretation will be completed by October at which time maps will be produced and circulated and ground checked. This effort is a complete reinterpretation and not based on the test work reported in the six month Type II report for the period of January 1 - June 30, 1973. The new interpretation includes the entire seven county Metropolitan area and is utilizing a variety of recently acquired images.

Meetings with DNR Assistant Commissioner, Mr. Archie Chelseth and Planning Administrator, Mr. Jerome Kuehn resulted in three subsequent meetings with DNR: Planning division personnel, the Planning and Environmental Review Team, and field personnel. As a result of this meeting we received a list of information needs from each division in DNR. Some lists were useful in helping to refine classification schemes while others focused only on what they thought ERTS-1 could be used for. We are currently trying to obtain new listings that go beyond how they think ERTS imagery could be used and encompass all their information needs.

- f. No technical reports or papers have been completed in this reporting time interval.
- g. On April 25 we requested extension of the data analysis phase through December 31, 1973. In subsequent telephone conversations with Mr. G. R. Stonesifer and Mr. R. D. Phillips the extension proposal was discussed and by early June Mr. Phillips confirmed approval by phone. He indicated a confirmation letter would follow some time in July. To date we have not received written confirmation but are assuming that the proposed extension is operational.
- h. No changes have been made in the standing order form.
- i. ERTS image description form is attached.
- j. Five data requests were filed on 7/11/73, 7/23/73, 8/7/73, 8/10/73 and 8/17/73.
- k. No budgetary changes are forseen at this time.
- 1. No personnel changes have occurred.

Greenway Township Itasca County Minnesota Land Use from ERTS-1 1972

Open/cultivated

Wetlands
Conifers
CBD
Mixed/conifers dom.
Tailings piles
Water

Water

Water

Hardwoods
Urban

Mixed/hardwoods dom.

Mines

Tailings piles

Water filled pits

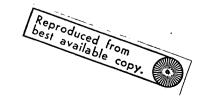
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Greenway Township Itasca County Minnesota Land Use from MLMIS 1969

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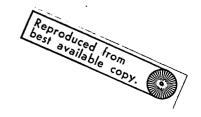
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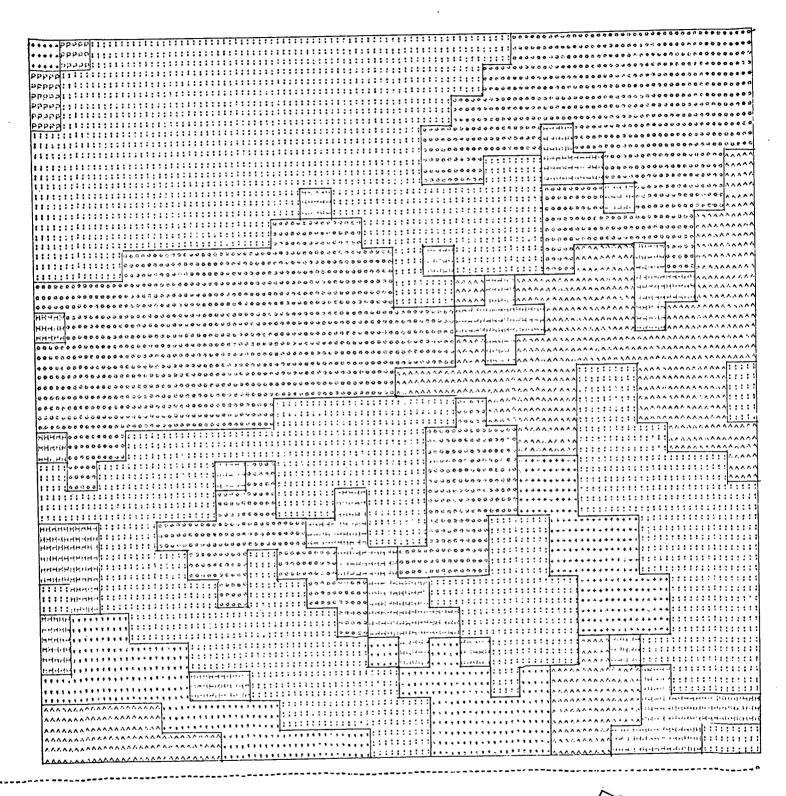
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COUNTY NO. 31 1056232 Greenway Township Itasca County Minnesota
Soil Landscape Units
1972



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ERTS IMAGE DESCRIPTOR FORM

(See Instructions on Back)

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